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Essay on
Cholera Infantum
By
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Virginia

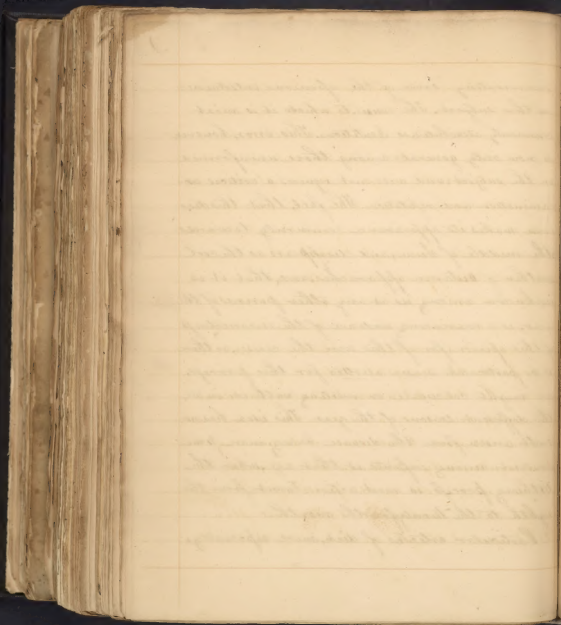
Passed March 23^d
1825

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The disease, of which I intend to give a brief, and I fear an imperfect account, has so often formed the subject of medical dissertation, that I feel some reluctance in presenting it to the Faculty. I am induced to persevere however, by the reflection, that altho much has been done to elucidate the nature and treatment of Cholera Infantum, it is still involved in great doubt and perplexity, and is more destructive to children than any other cause known, particularly in this part of Virginia: and although, I may fail to present any important facts or reflections, I may possibly assist in directing enquiry to a subject of such vital importance.

To treat the disease in some what of a systematic form, it will be necessary to examine separately into its causes, general mode of attack, symptoms, and treatment. I shall first then, give my views of the cause, after briefly

enumerating some of the opinions entertained on this subject. The cause, to which it is most commonly attributed, is Sention. This error, however, is now only general among those uninformed on the subject; and will not require a critical examination and refutation. The fact, that this disease makes its appearance commonly towards the middle of Sum, and disappears as the cool weather of Autumn approaches; and, that it is unknown among us at any other periods of the year, is a convincing evidence of the incorrectness of this opinion: for if this were the cause, as there is no particular season allowed for this process, we might calculate on meeting with it in all the different seasons of the year. This idea has no doubt arisen from the disease being more prevalent among infants at that age, when the teething process is most active: To wit, from the eighth to the twentyfourth month.

Particular articles of diet, more especially,



fruit, as it usually appears at the season when our fruits are in the greatest perfection, and in general use. Many might be led to suspect this as the most prominent cause.

It will only be necessary, however, to remove this impression, to advert to the fact that the disease is very rare among our country children who have free access to fruit at all times; & when it does appear among them, it is usually, in low marshy and level countries, where they are much exposed to the heat of the Sun, and vegetable exhalation. Now, if any, I believe, now ascribe the complaint to the presence of worms. Dr. Cheyne, in his treatise on this disease, deservedly considered a work of the highest merit, seems disposed to attribute it to wearing children injudiciously; although I agree with the Doctor, in his idea of the parts affected; the form of the disease; and the general plan of treatment; I think, he is in an error in as-

-cribing it to this cause. In this neighbourhood, there is seldom a summer passes, that the disease is not very prevalent; and it very frequently occurs in children, who are still at the breast, and in those that have been weaned four, six, and eight months. From this belief, which became general after the appearance of Doctor Cheyne's book, mothers in our section of country, by the advice of their Physicians, usually wean their children during the winter, and when their age forbids this course, either continue to nurse them themselves, or procure healthy nurses for them during the summer.

In a variety of instances, it has made its appearance in children, two, three, and four years of age. Depriving children at too early an age of the milk of the mother, bland, mild, and digestible, peculiarly fitted to their feeble digestive powers, and forcing on them crude, heavy, and indigestible matter, may, and doubtless does, begot

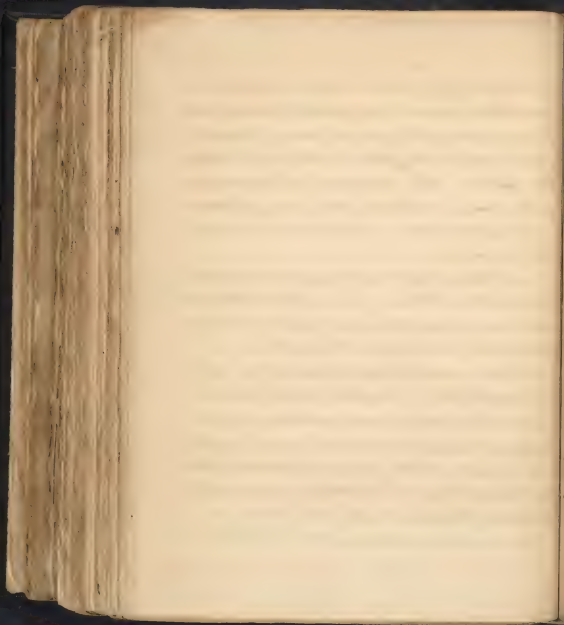
a susceptibility in their tender digestive organs, that renders them peculiarly obnoxious to the impression of the genuine cause of this complaint, which has probably led Mr C. to adopt this opinion. Van Swieten, (in his commentaries on Boerhaave,) in classing the causes of Dysentery in fevers, ascribes the complaint in children to Acid acrimony^d

Mr Gardiner, in his animal economy, attributes the Cholera of grown persons to heat, and enters into a long statement of facts, deductions, and reasonings, to substantiate the doctrine.

There is much plausibility in Mr G's views on this subject; but I think, he stops too short.

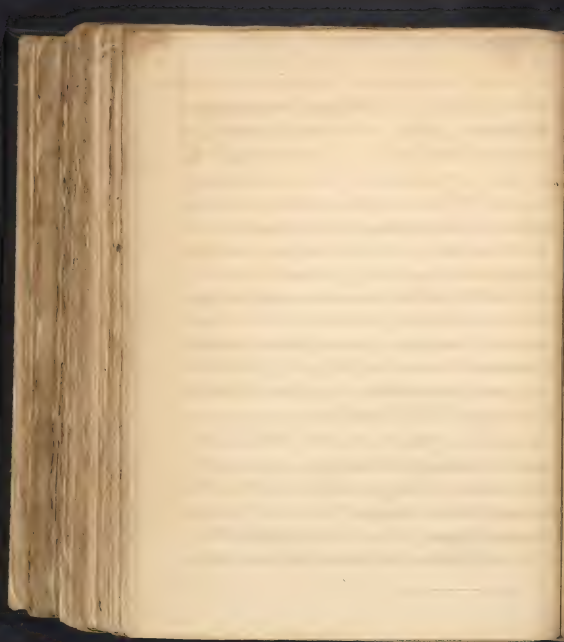
Had he examined more critically into the variety of changes, produced on exposed marshy surfaces, and vegetable matter, by heat, moisture, &c. I do not think he would have been satisfied to ascribe the disease to this cause alone.

I am inclined to believe, that the Cholera of



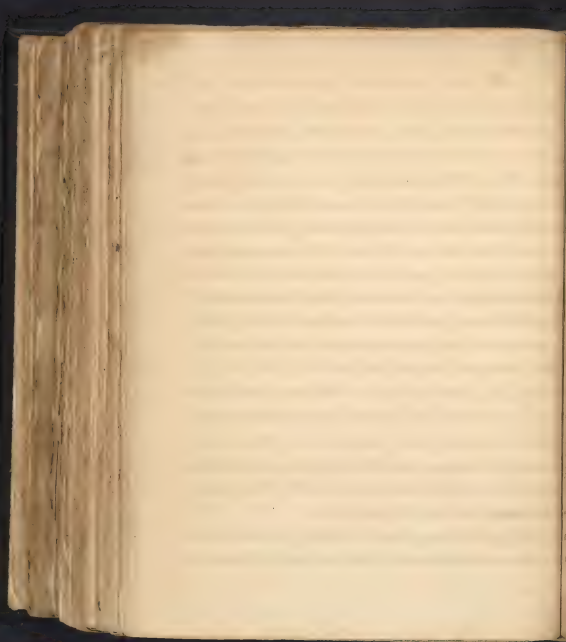
children, proceeds from the same cause or changes that produce cholera morbus and Diarrheas of grown persons: in truth, (when in an increased degree) the fall fevers of our climate, to wit, a combination of heat, and the peculiar effluvia, denominated by different writers, malaria, marsh, or vegetable exhalation, miasma. &c. The reasons, which have influenced me in forming this opinion, are

- 1st That the cholera commonly makes its appearance in children just before the bilious fevers show themselves in grown persons, which may be ascribed to a more irritable state of the habit, and greater susceptibility to impressions from this tender age.
- 2nd To the cholera's being more general and violent in those seasons, when bilious fevers prevail extensively.
- 3^d Because the same remedies which relieve bilious fever when modified have done more towards curing this disease, than any remedial agents I have seen employed.
- 4th As Mr Cooke, in his prize essay contained in



the last number of the Medical Recorder, very judiciously remarks; because the remedies employed, almost invariably bring away the same dark coloured, brown, or coffee grounds looking material, which generally occurs in bilious fevers and which, with scarce an exception, precedes amendment in both diseases. I have this moment been informed by a gentleman of intelligence and respectability, who has a child about ten months of age, labouring under this disease, that he had intended to take it to a relation's in the country; but had just heard, that all the children in the family were affected in the same manner, and some violently. The situation, to which he contemplated carrying his family, is in a low, marshy country, bordering on the Rappahannock, between twenty and thirty miles below this place, particularly subject to fall fevers.

This, with many other facts, of a similar character, corroborates the opinion, which I entertain



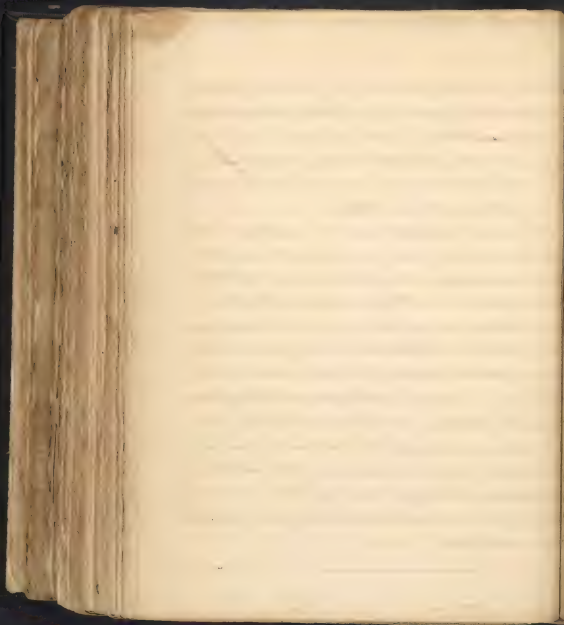
to the cause of the disease. The disease, being
 less prevalent generally in country situations, than
 in towns, would at first view seem to militate
 very strongly against this doctrine; but when it
 is considered, that our towns, particularly, in the
 south, are built on water courses, in situations fa-
 vourably disposed to the generation of miasmatick
 exhalation, that from the denseness of the buildings,
 a free circulation of air is necessarily prevented; and
 that on this account, the cause, when generated, con-
 tinues to act almost without intermission, the
 epidemic will loose much of its weight, were it to
 operate on children in the same uninterrupted ma-
 nner in country places I doubt not the same ef-
 fects would ensue. This, however, is impossible,
 from the open and unconfined situations of our
 country dwellings. This cause may, and does, gene-
 rally exert at the proper season in such a limited
 degree, so as by its continued operation, to exercise a
 considerable influence on the full and inevitable



habits of children, when it will have no effect on the constitutions of grown people, then, the cause becomes more concentrated, and those of more mature age, begin to sink under its withering impulse. *Fall fever*, with all its varied forms, also attacks the infantile and helpless class of our Society;

I feel much gratification in being sustained in this opinion by many of the most respectable medical authorities, among whom, I would mention *Dr. Rush*, who considered the disease misplaced *fall fever*.

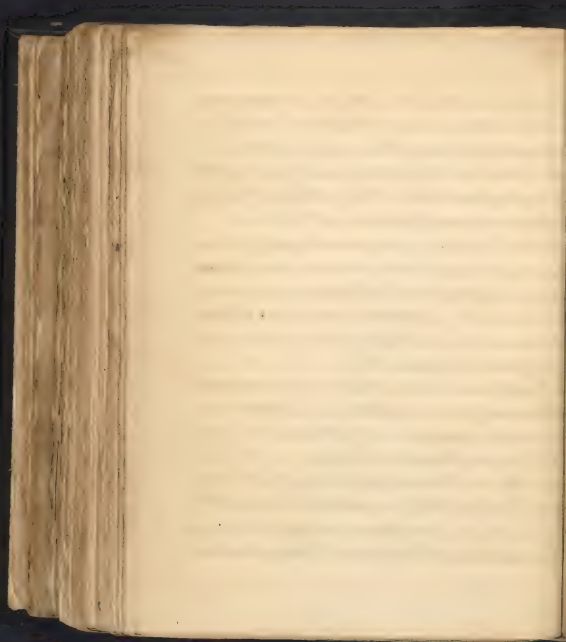
Dr. Butler, who emphatically calls it "Infantile remittent fever." *Dr. Coghorn*, who, in his treatise on the diseases of *Infancia*, detailing the order in which the summer and autumnal distempers make their appearance, makes this striking remark: "Towards the end of June, the young children are attacked with a smiting, purging, and periodical fever, often of the erratic kind, without any fixed type." And again there seems likewise to be a near alliance amongst all the diseases above mentioned.



"Those, who have the rash or efuse to great degree, are very liable to tertian fevers; on the other hand, in the paroxysms of tertians, those cutaneous eruptions are apt to break out. The cholera morbus sometimes hath its regular periods, like a tertian, as the paroxysms of tertians are frequently attended with cholera.

Sometimes a tertian is changed into a dysentery, or a dysentery becomes a tertian; and when one of these diseases is suppressed, the other often ensues, nor is it uncommon for dysenterick fevers to put on the form of tertians; and for the fits of tertians to be regularly accompanied by gripes and stools."

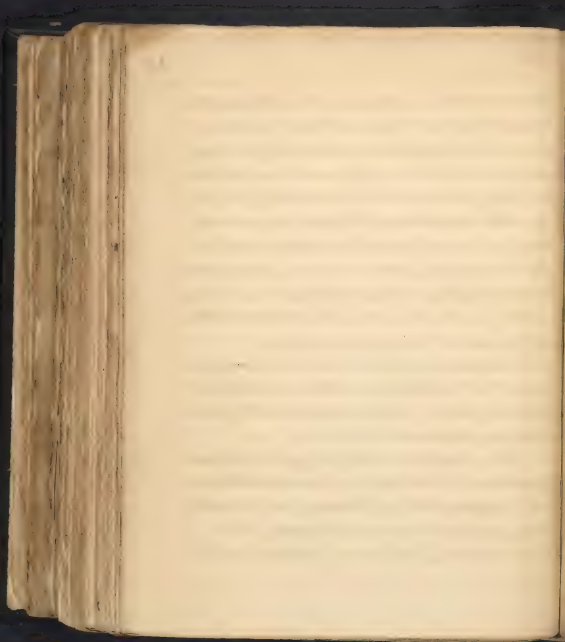
Symptoms.—The little patients are frequently seized, without such previous manifestations of indisposition, as to indicate its approach, or excite attention with regular cholera morbus, attended with languor and commonly great thirst; the matter ejected, being for the most part the fluids taken in, sometimes tinged with bile and generally very sour; frequent and copious, and sometimes exhibiting the appearance of whey intermixed



with curds that scarcely stain the naphtha; at others, strongly tinged with green; when the attacks are thus violent, fever generally attends, the pain is very distressing; the child suffers soon become prostrated, and unless soon relieved, it hurries them off in a few days. This is not however the most usual mode of attack. It most frequently, shews itself in the form of a mild diarrhoea, with occasionally nausea at the stomach, griping, pains, and fretfulness, and those symptoms are sometimes so slight, as to attract little attention until the disease is confirmed.

The appearance of the evacuations here, is pretty similar to the discharges in the more violent attacks, but after a few days continuance, they become slimy and tinged with blood.

The symptoms, in the progress of the disease, are detailed by Dr Rush in his valuable Treatise on this subject, with such accuracy and force, that I hope I shall be excused for quoting them, after describing the mode of attack, and the



appearance of the matter discharged, he thus continues:
 "The pulse is quick and weak; the heat is unusually warm; while the extremities retain their natural heat or incline to be cold. The fever is of the remitting kind, and discovers evident exacerbations, especially in the evenings. The disease affects the head so much, as in some instances to produce symptoms, not only of delirium, but of mania, insomuch that the children throw their heads backwards and forwards, and sometimes attempt to scratch, and bite their parents, nurses, and even themselves. A swelling frequently occurs in the abdomen, and in the face and limbs.

An intense thirst attends every stage of the disease. The eyes appear languid and hollow, and the children generally sleep with them half closed.

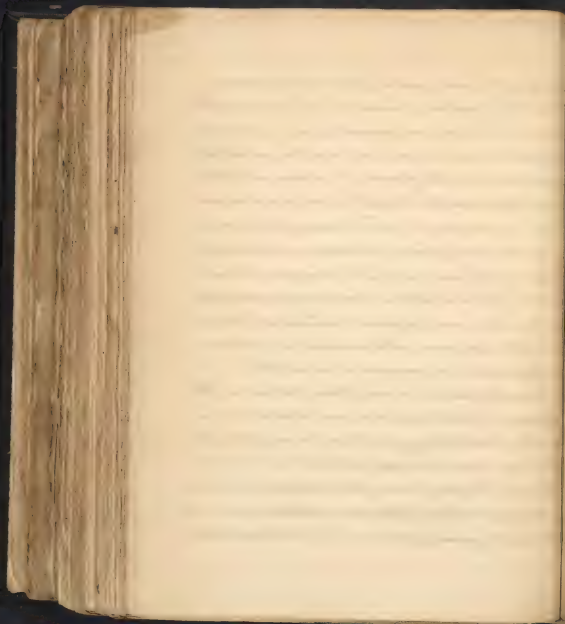
Such is the insensibility of the system in some instances in this disease, that flies have been seen to alight upon the eyes when open, without exciting a motion in the eyelids to remove them.

Sometimes the vomiting continues without the

purging, but more generally the purging continues without the vomiting, through the whole course of the disease. The stools are frequently large, and extremely fetid, but in some instances they are without smell, and resemble drinks and aliments, which have been taken into the body. The disease is sometimes fatal in a few days. I once ^{saw} it carry off a child in four and twenty hours. Its duration is varied by the season of the year, and by the changes in the temperature of the weather. A cool day frequently abates its violence, and disposes it to a favourable termination.

It often continues, with occasional variations in its appearance, for six weeks or two months.

Where the disease has been of long continuance, the approach of death is gradual and attended by a number of distressing symptoms. An emaciation of the body to such a degree, as that the bones come through the skin, livid spots, a singultus, convulsions, a strongly marked hypochondriac countenance, and a sore mouth, generally precede the fatal termination.



of this disease. How children ever recover, after the last symptoms which have been mentioned make their appearance?

In the treatment of this complaint, I am sorry to be compelled to acknowledge that almost equal obscurity and uncertainty exists, as in the case.

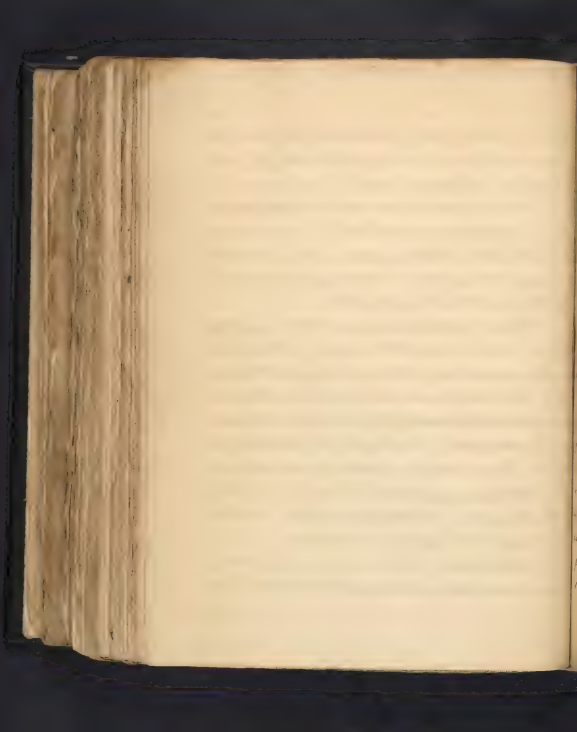
The most approved method now in use, in the hands of the most skilful and judicious practitioners, too often fails to procure relief. Perhaps no case exists, where the force of example has done more mischief than in the management of this affliction.

The course first chalked out for its cure embraced all the alkaline and antacid remedies, with Spices and Rheubarb. This plan was adopted, no doubt, from an erroneous idea of its cause, originating probably from the acid state of the matter discharged in the disease, and although so very many go down to the grave, under the most rigid adherence to this mode of treatment, it is as astonishing as it is lamentable, that it constitutes the chief curative means in the

hands of a vast majority of Practitioners of the present day. And I much fear, will continue to constitute the prominent reliance of very many until its cause and nature are satisfactorily developed. Under the best mode of treatment, failures frequently occur. I think this is in some measure attributable to the flattering nature of the disease, throwing us off our guard, and rendering nurses and mothers less attentive than they should be.

When the attack first shews itself an emetic of Spoea should be administered, unless contraindicated by the circumstances of the case: what effect this remedy has on the liver, I know not, but vitiated bilious matter is unquestionably brought off by a cathartic with much more certainty after than before the operation of an emetic. It also determines to the surface, and what is infinitely more important, it removes from the coats of the stomach much viscid matter, which coats them, and prevents the effect of our medicines.

The stomach, being the organ upon which all our remedies exhibited internally make their impressions,



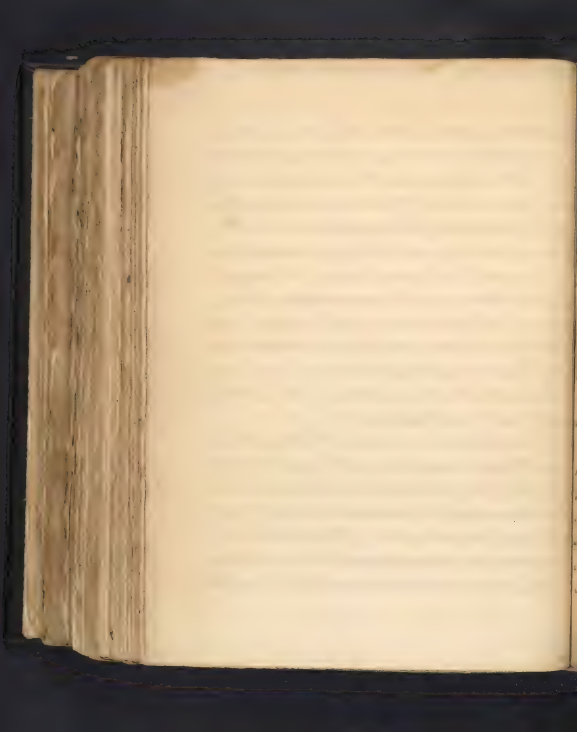
which by sympathy, are extended throughout the system; it is obvious, that, whilst its coats are loaded, with viscid mucus, we must fail in producing our effects as we desire. A very forcible and appropriate example of the doctrine of sympathy, as taught by Professor Chopman, is exhibited in this affection. It is mentioned by Mr Rush, when speaking of the effects of country air on children labouring under this complaint. "It is extremely agreeable to see the little sufferers revive as soon as they escape from the city air, and inspire the pure air of the country."

The effect here described as being immediate, no person can suppose that the absorption of the air produces the effect; it is nothing more than an abstraction of the poisonous exhalation, which constantly operating on the sensitive organs of children, produces morbid action, which, through the medium of sympathy, is extended all over the system; for I do not believe, that at the present day, any one to be found so hardy as to contend that miasmatic exhalations produce their effects through

the absorbent system. After the emetic has operated, a dose of calomel should be given, and its effects particularly noted. If the discharges alter their appearance, and assume a dark, brown, or black colour, it will seldom happen but that a suspension of the symptoms will occur. The vomit complaint will cease sometimes for six, eight, and ten hours, and the child will revive, and in every respect seem better; under these circumstances, a strong infusion of bark and snake-root, with a little lime water, should be administered; and if it has a tendency to run off by the bowels a few drops of Laudanum may be added.

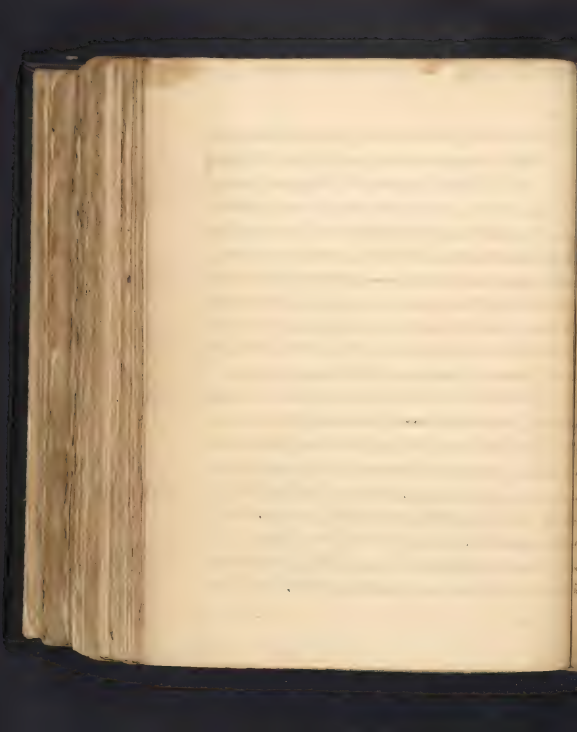
This simple plan has succeeded in several instances in arresting the complaint in toto.

Should the attack come on in the form of cholera morbus, the emetic may be dispensed with, and such remedies both internal and external, as have a tendency to relieve nausea, used; among the first, may be enumerated weak mint, julep, lime water alone or with new milk, Laudanum; and where acidity prevails, I have seen a solution of soda, with oil of aniseed, produce the most marked



benefit. A dose of Calomel, with a few drops of Laudanum, under those circumstances, will frequently arrest the puking, when most of the other remedies fail. The external remedies are flannels wrung out of a decoction of aromatic herbs sprinkled with camphorated spirit, or Laudanum applied over the abdominal region; a plaister of opium, with camphor, dissolved in some aromatic liquid on the stomach; or, if the symptoms are urgent, a blister should be drawn. After the system has in some degree recovered from the first shock, if Calomel has not been administered, a dose should be given and if the consequences ensue above mentioned, the Tonic plan commenced immediately, and the patient transferred to a more healthy situation.

If should these means fail, and the disease assume a more determined shape, small portions of Calomel may be given morning, noon, and night, combined with Cre. Spt. in as small bulk as possible; or where the portion is large, mucus is apt to be excited, and when once brought on by any cause, it is difficult to remove. Where the stomach is not too irritable, a small portion of Spœac may be com-



lined with the calomel. The calomel is given under a belief, that not only the liver, but most of the glands in the vicinity of the intestinal canal are disordered in their action and require an alterative to effect a healthy restoration during the use of the remedy; particular attention should be paid to the nature and appearance of the discharges, and when they assume a dark or brown appearance, and some consistence an amendment of the health will soon be manifest. As auxiliary to the Calomel plan, a variety of remedies may be employed to obviate unpleasant symptoms as ^{they} occur. If aperients are necessary to ^{carry off} offensive matter, that may be supposed to have accumulated, Rhubarb, calomel, magnesia, or an increased quantity of Calomel may be given; and to obviate the pain and griping, which attend, when the discharges are mixed with mucus and blood, injections of liquid starch, flax seed tea, or mucron broth with Laudanum will have a good effect in allaying the irritation, and quieting the symptoms. In this state of the bowels, the Ipecac is a valuable auxiliary. There has been so much said on the duty in this complaint, that I shall pass it over. The last and most important remedy, I shall mention, is pure country

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about which I believe all agree

